

REMARKS

This Amendment is responsive to the Office Action dated May 4, 2007. Applicant has amended claims 19 and 37, and added claim 38-40. Claims 1, 2, 4-9, 11-13, 15-20, and 22-40 are pending.

Information Disclosure Statement

The Office Action found that the information disclosure statement (IDS) filed on November 2, 2006 failed to comply with 37 C.F.R. 1.98(a)(1), and, therefore, the information referred to therein was not considered. Applicant believes that the Office Action is referring to the Supplemental IDS filed on October 26, 2006, before the mailing of the first Office Action on the merits following the filing of the Request for Continued Examination (RCE). The Supplemental IDS was filed in order to submit a Declaration under 37 C.F.R. 1.132.

While Applicant does not agree with the Office Action's conclusion that the Supplemental IDS filed on October 26, 2006 that fails to comply with 37 C.F.R. 1.98(a)(1), Applicant submits another Supplemental IDS with the present Amendment. Applicant respectfully submits that the attached Supplemental IDS complies with 37 C.F.R. 1.98(a)(1), and respectfully requests consideration of the Declaration under 37 C.F.R. 1.132.

Summary of Examiner Interview

On July 18, 2007, Applicant's representatives Steven J. Shumaker and Jessica H. Kwak conducted a telephone interview with Examiner Tammie Heller. Applicant's independent claims 1, 19, and 37 and the Maeda et al. reference (U.S. Patent Applicant Publication No. 2002/0030630) were generally discussed. No exhibits were introduced, and no agreement was reached with respect to the claims.

Claim Rejection Under 35 U.S.C. § 103(a)

In the Office Action, claims 1, 2, 4-9, 11-13, 15-20 and 22-37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stanton et al. (U.S. Patent No. 6,249,703) in view of Maeda et al. Applicant respectfully traverses the rejection. The applied references fail to

disclose or suggest the inventions defined by Applicant's claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

Independent Claims

With reference to independent claim 1 as previously presented and independent claims 19 and 37 as amended, for example, the applied references lack any teaching that would have suggested a programmer for a medical device that includes an internal antenna defining an aperture and a battery bay in substantial alignment with the aperture, where the battery bay extends at least partially into the aperture. As the Office Action recognizes, Stanton et al. fails to teach a programmer including an internal antenna defining an aperture and a battery bay in substantial alignment with the aperture.¹ The Office Action looked to Maeda et al. to cure this deficiency in Stanton et al. In particular, the Office Action found that FIG. 3 of Maeda et al. taught a telemetric communication device that includes a loop antenna 2 that defines an aperture and a battery 1 in substantial alignment with the aperture. However, the Office Action failed to discuss how either Stanton et al. or Maeda et al. teach a battery bay extending at least partially into the aperture defined by the internal antenna.

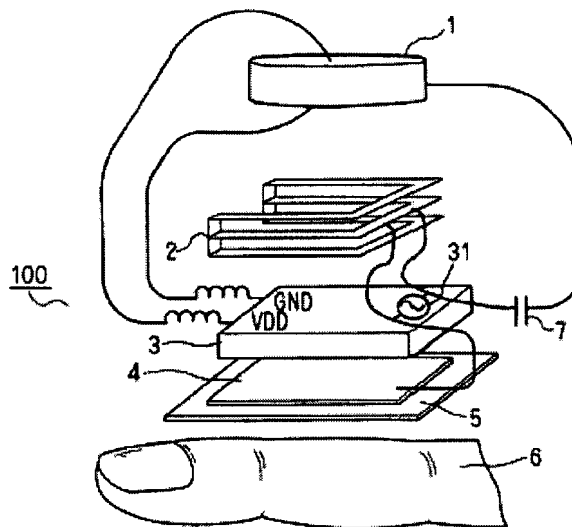
During the telephone interview with Examiner Heller on July 18, 2007, Examiner Heller clarified that the Office Action's position was that Maeda et al. teaches a battery bay extending at least partially into the aperture defined by the internal antenna. In particular, Examiner Heller reasoned that FIG. 3 of Maeda et al. illustrates an exploded view of a communication device, and upon assembly, the battery 1 would extend into the aperture defined by the internal antenna 2. Applicant respectfully disagrees with the Office Action's interpretation of FIG. 3 of Maeda et al. Maeda et al. describes FIG. 3 (copied below) as showing a schematic view of an antenna mounted in a portable radio communication device.² The communication device includes a center-fed loop antenna 2 that is a magnetic field-type antenna and a dipole, electric field-type antenna, which is defined by a cover of battery 1, a shield plate 4, and a finger 6 of a human being.³

¹ Office Action at page 3, item 5.

² Maeda et al. at paragraph [0012].

³ *Id.* at paragraphs [0026] and [0033].

FIG. 3



At no time does Maeda et al. explicitly teach that FIG. 3 illustrates an exploded view of a communication device. Even assuming FIG. 3 shows an exploded view of a device, which Applicant does not agree with, Maeda et al. completely lacks any written description to support the Office Action's position that Maeda et al. teaches a device in which the battery 1 extends at least partially into an aperture defined by an antenna 2. Maeda et al. does not describe the physical relationship between the battery 1 and antenna 2 when the device is assembled. Furthermore, even assuming FIG. 3 illustrates an exploded view of a device, FIG. 3 does not provide assembly lines that indicate or even suggest a physical arrangement between the battery 1 and antenna 2. Accordingly, the Office Action's basis for asserting that Maeda et al. teaches a specific relationship between the battery 1 and antenna 2 is unclear. Nothing in Maeda et al. states, either explicitly or implicitly, that the battery 1, which is a part of a different type of antenna than antenna 2, extends at least partially into an aperture defined by the antenna 2 when assembled.

Nothing in Maeda et al. even suggests that an arrangement in which the battery extends at least partially into an aperture defined by the antenna provides an advantage or that the communication device must include a battery extending at least partially into an aperture defined by the antenna. Given the lack of disclosure in Maeda et al., the skilled person would not have been aware of the capability of extending the battery at least partially into an antenna aperture. In particular, with the minimal details offered by Maeda et al., it is unclear whether the battery

would even fit within any aperture defined by the antenna or whether the arrangement between the battery and antenna suggested by the Office Action would even facilitate proper operation of its communication device.

Maeda et al. does not even discuss the size of the antenna 2, or an aperture (which Applicant disputes is even an aperture) defined by such the antenna. Based on the disclosure provided by Maeda et al., it is unclear whether the alleged aperture defined by the antenna in Maeda et al. would be large enough to allow the battery to extend at least partially into the aperture. In fact, based on FIG. 3, Applicant submits that even if the antenna 2 defined an aperture, the battery 1 appears to be too large to extend at least partially into any aperture defined by the antenna 2.

Given the lack of support for the assertion that the battery 1 extend at least partially into an aperture defined by antenna 2, the Office Action appears to be relying on an improper finding of inherent disclosure in Maeda et al. to support the rejection of the claims. The fact that a certain characteristic may be present in the prior art is not sufficient to establish the inherency of that result or characteristic.⁴ The Office Action must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.⁵ No reasonable support has been provided for the determination that the battery 1 necessarily extends at least partially into an aperture defined by the antenna 2, based on FIG. 3. Rather, other configurations between the battery 1 and antenna 2 are just as likely in view of the lack of description provided by the Maeda et al. reference. Accordingly, Applicant submits that the allegedly inherent characteristic does not necessarily flow from the teachings of Maeda et al.

The other figures of Maeda et al. also fail to show a battery that necessarily extends at least partially into an aperture defined by an antenna. For example, FIG. 4 of Maeda et al. illustrates a center-fed loop antenna 2 that is integrated with a multi-layered circuit plate 3.⁶ The loop antenna 2 is formed as conductive patterns on various layers of the circuit plate 3. Thus, it is unclear how the conductive patterns defining the antenna 2 shown in FIG. 4 of Maeda et al. would even define an aperture, much less how an antenna formed by conductive patterns on a

⁴ *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ.2d 1955, 1957 (Fed. Cir. 1993); MPEP § 2112.

⁵ *Ex parte Levy*, 17 USPQ.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original); MPEP 2112.

⁶ Maeda et al. at FIG. 4 and paragraphs [0034] – [0035].

circuit plate would define an aperture into which a battery bay may extend at least partially into, as required by Applicant's independent claims. The circuit plate 3 appears to be substantially solid because Maeda et al. teaches that holes are formed through the circuit plate in order to connect conductive patterns from each layer.⁷ Based on the aforementioned deficiencies in Maeda et al. and Stanton et al., Applicant's independent claims 1, 19, and 37 are patentable over the applied references.

It is also unclear why one skilled in the art would have been motivated to combine Stanton et al. with the teachings of Maeda et al. The Office Action found that it would have been obvious to one having ordinary skill in the art at the time of the invention to combine Stanton et al. with Maeda et al. "in order to facilitate a more isotropic configuration of the telemetric energy, and thereby present a load to the internal antenna."⁸ The Office Action offers no other motivation for modifying the Stanton et al. medical device programmer to include the communication device taught by Maeda et al.

Applicant agrees that Maeda et al. teaches a communication device that combines two types of antennas, i.e., a center-fed, magnetic field-type loop antenna 2 and an electric field-type dipole antenna in order to make the directivity of the antenna more isotropic.⁹ However, nothing in Maeda et al. nor Stanton et al. support the conclusion that a more isotropic configuration of telemetric energy presents a load to an internal antenna. The Office Action offers no support for such an assertion. The Office Action likewise points to no other apparent reason why one of ordinary skill in the art would have contemplated modification of the Stanton et al. device as suggested by the Examiner.

If the Office Action is relying on scientific theory to support the conclusion that a more isotropic configuration of telemetric energy presents a load to an internal antenna, the Office Action must provide evidentiary support for the existence and meaning of that theory.¹⁰ Similarly, if the Office Action is relying on official notice to support the assertion that it is well known that a more isotropic configuration of telemetric energy presents a load to an internal antenna, Applicant respectfully submits that the Office Action is relying on an improper Official

⁷ *Id.* at paragraph [0036].

⁸ Office Action at pages 3-4, item 5.

⁹ Maeda et al. at paragraph [0033].

¹⁰ M.P.E.P. § 2144.02, citing *In re Grose*, 592 F.2d 1161, 201 USPQ 57 (CCPA 1979)

Notice and traverses the Official Notice. M.P.E.P. § 2144.03 provides guidance as to when it is appropriate to assert that facts are well known. In particular, M.P.E.P. § 2144.03 states that, “[i]t would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known.”

Applicant submits that the assertion presented by the Office Action that a more isotropic configuration of telemetric energy presents a load to an internal antenna is not capable of instant and unquestionable demonstration as being well-known. Unless the Office Action can establish an evidentiary record based on concrete prior art references that establish that it would have been obvious to a person with ordinary skill in the art to modify Stanton et al. with Maeda et al. in order to present a load to an internal antenna, Applicant’s independent claims 1, 19, and 37 should be allowed.

The Office Action appears to be relying on hindsight as a motivation for combining Stanton et al. with Maeda et al. Applicant’s disclosure teaches that batteries placed in a battery bay that extends at least partially into an aperture defined by an internal antenna may help contribute favorably to the RF load presented to the internal antenna, thereby helping enhance immunity of the internal antenna to electrical and electromagnetic interference during telemetry sessions with the implantable medical device.¹¹ The Office Action presents the very same motivation without any support or motivation found within the cited references. Hence, one of ordinary skill in the art would have been aware of such motivation only upon consultation of Applicant’s disclosure, which is impermissible.

The Court of Appeals for the Federal Circuit has made clear that motivation to combine references must be found in the prior art, and that it is impermissible hindsight for the Office Action to use the motivation stated in Applicant’s own disclosure as a blueprint to reconstruct the claimed invention from the prior art.¹² It is improper to point to teachings of motivation contained within Applicants’ own disclosure. Rather, the Office Action’s rejection of the claims must be based on substantial evidence in the record demonstrated that the motivation for making

¹¹ Applicant’s disclosure at paragraph [0112].

¹² See *Interconnect Planning Corp. v. Feil*, 227 USPQ 543 (CAFC 1985); see also *In re Fine*, 5 USPQ.2d 1596, 1598 (CAFC 1988); see also *In re Gorman*, 18 USPQ.2d 1885, 1888 (CAFC 1991); see also *Al-Site Corp. v. VSI International, Inc.*, 50 USPQ.2d 1161, 1171 (CAFC 1999).

the claimed invention resides in the prior art.¹³ In summary, the Office Action's conclusion of obviousness, and particularly the cited motivation to modify Stanton et al. in view of Maeda et al., is unsupported by any substantial evidence in the record.

For at least these reasons, the Office Action has failed to establish a prima facie case for nonpatentability of Applicant's independent claims 1, 19, and 37 under 35 U.S.C. 103(a). Withdrawal of this rejection is requested.

Dependent Claims

Claims 2, 4-9, 11-13, and 15-18 depend from claim 1 and claims 20 and 22-36 depend from claim 19. As established above, independent claims 1, 19, and 37 are patentable over the cited references, and as a result, all claims depending therefrom are also patentable over the cited references. The prior art of record also fails to teach each and every element of dependent claims 2, 4-9, 11-13, 15-18, 20, and 22-36, and the rejection should be withdrawn. Applicant addresses some of the dependent claims below for purposes of illustration.

Applicant's claims 5 and 23 recite a programmer including a first circuit board and a second circuit board. Applicant's claims 8 and 26 recite a programmer in which an internal antenna is mounted to a first circuit board, and a display is mounted to a second circuit board. In the rejection of claims 8, 9, 12, 26, 27, and 29, the Office Action found that Stanton discloses that an "internal antenna may be mounted on a circuit board 52 controlling telemetric operations while a display 32 may be disposed on a separate circuit board 50," and relied on FIG. 7, and column 8, lines 23-33 as teaching the elements of claims 8 and 26. Applicant submits that the Office Action appears to have misinterpreted the content of Stanton et al. Reference number 52 in FIG. 7 of Stanton et al. refers to a transmitter circuit¹⁴, rather than a circuit board, and reference number 50 refers to an integrated circuit.¹⁵ Stanton et al. does not teach that the transmitter circuit 52 and integrated circuit 50 are circuit boards.

¹³ *In re Lee*, 61 USPQ.2d 1430, 1433 (Fed. Cir. 2002).

¹⁴ Stanton et al. at col. 6, ll. 63-67.

¹⁵ *Id.* at col. 8, ll. 41-50.

Furthermore, with respect to the rejection of claims 8, 9, 12, 26, 27, and 29, the reference number 32 in Stanton et al. refers to a light emitting diode (LED), rather than a display. Applicant's claims 12 and 29 specify that the display includes a liquid crystal (LCD) display. It is clear that the LED 32 in Stanton et al. is not an LCD display mounted on a circuit board different from the circuit board on which an internal antenna is mounted, as recited by Applicant's claims 12 and 29.

For at least these reasons, the Office Action has failed to establish a prima facie case for nonpatentability of Applicant's claims 2, 4-9, 11-13, 15-18, 20, and 22-36 under 35 U.S.C. § 103(a). Withdrawal of the rejection is respectfully requested.

New Claims

Applicant has added claims 38-40 to the pending application. No new matter has been added by the new claims. Support for claims 38-40 is found throughout Applicant's disclosure as originally filed, including paragraphs [0066] and [0072], and FIGS. 15 and 16. The applied references fail to disclose or suggest the inventions defined by Applicant's new claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed inventions. As one example, the cited references fail to disclose or suggest, a programmer for a medical device that includes an internal antenna defining an aperture, a battery bay that extends at least partially into the aperture, and telemetry interface coupled to the internal antenna, where the telemetry interface drives the internal antenna to transmit instructions to the medical device and process signals received from the medical device via the internal antenna, as recited by claim 38. Maeda et al. does not teach a device including such a telemetry interface coupled to an internal antenna.

As another example, the cited references fail to disclose or suggest an internal antenna that defines a substantially closed loop, as recited by claim 39, or an internal antenna defining a substantially closed loop and a central aperture within the closed loop, as recited by claim 40. As FIG. 3 of Maeda et al. clearly illustrates, its antenna 2 does not define a closed loop or an aperture, much less an aperture that is substantially central within a closed loop. The antenna shown in FIG. 3 of Maeda et al. merely defines a slot, which is not a closed loop.

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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